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PAPER AND FABRIC PROCESSED GOODS COATED WITH VEGETABLE EXTRACT
OILS OF VARIEGATED BAMBOO, PEARL BARLEY, ETC.

Inventor: Giichi Hayashi, 19-12 Aza
Zenizutsumi,
Myodaiji-cho, Okazaki-shi

Applicant: Airin K.K., 1-5 Aza
Okiorito, Myodaiji-cho,
Okazaki-shi

Agent: Ichiro Saeki,
patent attorney

Claim

Processed goods for preventing rough skin or eczematous irritation, characterized by coating vegetable extracts or oils of variegated bamboo, pearl barley, peach or loquat on paper or fabric products, as described in the following text.

Detailed explanation of the invention

The present invention is concerned with a process using oil extracted from variegated bamboo or pearl barley and effective for preventing contamination of the anus and nourishing rough skin, or using extracts obtained from variegated bamboo, pearl barley, peach, plum, or loquat, for effective prevention of skin rash or eczema, bleeding associated with hemorrhoids, and having

bactericidal action, for coating paper or fabric to obtain sanitary paper or cloth. Using a conventional paper or fabric product for sanitary products including diapers, sanitary napkins, and sanitary fabric caused eczema or rash, especially in the summer time when the product was brought into contact with the skin surface, which interrupted anal function. If the anus was contaminated due to hemorrhoids, the anal contamination had an adverse influence on using the paper or fabric to prevent leaking. There were a lot of sanitation problems, including contamination caused by *E. coli* bacteria or by *Bacillus subtilis*. Since the contamination caused skin inflammation which could not be cured, a treatment for the skin inflammation to be developed.

Therefore, the present invention effectively prevents skin disorders caused by anal contamination when oil extracted from variegated bamboo or pearl barley is coated on the skin surface around the anus, and effectively prevents skin infection when paper or fabric coated with the oil is worn. The present invention also effectively nourishes rough skin when a cream of an extract obtained from variegated bamboo, pearl barley, peach, plum, or loquat is used, or paper or fabric coated with the cream is worn. The present invention also effectively prevents skin rash or eczema because it has both a bactericidal action and is water-repellent.

The oil from variegated bamboo or pearl barley contains vitamins E, K, and H in large amounts, which effectively inhibit

dermatitis or hair loss. Biotin or vitamin E is especially effective for dermatitis or frostbite.

An extract from peach or loquat contains vitamin A (carotene), other types of vitamins, organic acids and enzymes in large amounts, and also contains flavin mononucleotides. Since variegated bamboo contains a large amount of chlorophyll, it can adsorb and separate bacteria. Since variegated bamboo also contains oils and fats such as linoleic or oleic acid in large amounts, it can form an oil film on the skin surface which effectively inhibits dermatitis along with the vitamins.

Therefore, the same effects can be obtained by directly applying oil extracted from variegated bamboo or pearl barley using a brush for coating or by applying a cream or pomade made with oil extracted from variegated bamboo or pearl barley.

The present invention is advantageous when the product made by making an agent preventing skin rash or eczema using harmless and very safe plants as raw materials, then coating the agent on paper or fabric for coating, is processed then used, because the product can be easily applied on the affected surface, because the product can be easily handled.

In the following, the application of the present invention is explained with figures.

Both variegated bamboo and pearl barley are washed with water in a drum to remove dirt and sand, dried, cut, then treated in a high-pressure tank using hexane to extract oils and fats. Then the hexane is separated and evaporated to recover the oils

and fats in the following process; i.e., heating with high-pressure steam, then compressing using a press. Fruit from peach, loquat, or plum are washed with water, then dried. The seeds are mechanically removed, then the meat is beaten and kneaded using an echingurannar [transliteration], pressed, then filtered to obtain liquid. The liquid is heated and condensed to obtain a paste extract. The above-mentioned oil is kneaded with the paste using a kneader to obtain a processed leaf extract. As shown in Figure 1, the processed leaf extract (2) is applied on the top surface of a fabric or nonwoven fabric (3) for roll-coating, then either release paper or plastic film (1) is laminated to obtain a fabric compress. Figure 2 is an A-B cross-sectional view showing its side. Rolled paper (5) is sandwiched by rolls (5'), (6), or (6') and roll (4) of a roll coater; guided, one side of the rolled paper is coated with processed leaf extract (2); rolled paper (7) is laminated and pressed on the top surface, heated and sterilized using dryer (8), then wound using winding machine (9); then the laminated and rolled paper is cut using both a reel and a guillotine cutter to obtain [illegible], roll paper.

Figure 4 shows the size variation of *Bacillus subtilis* inhibition rink [circular zone of inhibition] made by applying an oil extract obtained by the method of the present invention, and it effectively inhibits the growth of *Bacillus subtilis* on a gelatin broth, in the center (about 1 cm square) that is obtained

by aging¹. *Bacillus subtilis* (100000) is evenly coated on the gelatin surface using a glass rod, then the above-mentioned oil extract is immediately coated on the center of the gelatin, then allowed to stand. The bactericidal effect is thus measured at 25°C. The result is shown in Figure 4. The size of *Bacillus subtilis* inhibition rink is enlarged to the width of 6 cm in 100 h, equivalent to about 6 times as much.

An example of a composition of variegated bamboo oil, pearl barley oil, peach (fruit) extract, loquat (fruit) extract, and plum (fruit) extract is shown in the following.

Example 1 for eczema or rash

| | |
|---|--------------|
| Variegated bamboo extract | 5 g |
| Pearl barley | 6 g |
| Peach extract | 3 g |
| Plum extract | 2 g |
| Loquat extract | 3 g |
| Variegated bamboo and pearl barley oils | 20 g |
| Adrenocortical hormone | small amount |

Example 2 for defecation

| | |
|-----------------------|------|
| Variegated bamboo oil | 10 g |
| Pearl barley oil | 10 g |

¹ [Editor's note: size of rink over time]

| | |
|-------------------------|-----|
| Powdered peach extract | 2 g |
| Powdered plum extract | 2 g |
| Powdered loquat extract | 2 g |

Example 3 for cosmetic application

| | |
|-----------------------------|-------|
| Variegated bamboo oil | 10 g |
| Pearl barley oil | 10 g |
| Emulsifier | 0.1 g |
| Stearic acid | 5 g |
| Alcohol in aqueous solution | 55 g |
| Squalene | 0.1 g |

Powdered fruit extract made by slicing the fruit, drying the sliced fruit at a low temperature under reduced pressure to obtain the solids, crushing the solids to obtain a fine powder, was used in Example 2. Example 1 was used as an example of a mixture for the bacteria growth inhibition test shown in Figure 4. The mixture (about 1 g) was applied to the tip of a glass rod for coating, which was then used to coat the center of the gelatin gel contained in a petri dish with the mixture. The result is also shown in Figure 4.

It is found in the result that, because both oils extracted from variegated bamboo and pearl barley and fruit extracts obtained by the method of the present invention are very safe, having harmless bactericidal effects, they can be eaten, and that

both the oils and fruit extracts are effective for the skin of elderly people or infants suffering eczema or rash, effective as a coating agent for patients suffering hemorrhoids or anal disorders, or effective for cosmetic applications. Therefore, the present invention is suitable for industrial application.

Brief explanation of the figures

Figure 1 is a front view showing a bactericidal fabric of the present invention. Figure 2 is an A-B cross-sectional view showing the side of bactericidal fabric of the present invention. Figure 3 shows a bactericidal paper coating process. Figure 4 shows the bactericidal property.

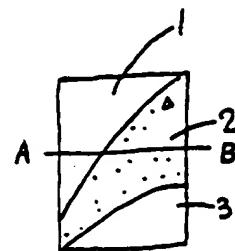


Figure 1

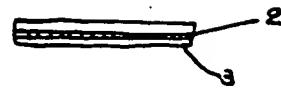


Figure 2

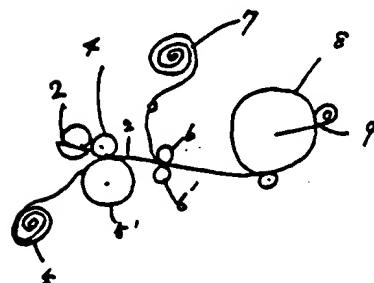


Figure 3

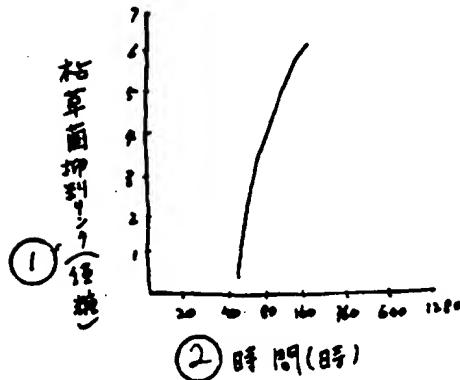


Figure 4.

Key:

- 1 *Bacillus subtilis* Inhibition rink ([illegible; possibly, length and width])
- 2 Time (h)